

1 Claims:

2 23. (Amended) 23. A multi-terrain amphibious vehicle comprising:

3 an elongated longitudinally extending chassis having a front a front end, a rear end, a left  
4 side, a right side, a center line, a bottom surface and a top surface;

5 at least two left side propulsion units and at least two right side propulsion units;

6 said left side propulsion units being longitudinally spaced from each other;

7 said right side propulsion units being longitudinally spaced from each other;

8 each of said left side propulsion units and said right side propulsion units comprising:

9 (a) a support means for each of said propulsion units on said bottom surface of said  
10 chassis comprising: a pair of laterally spaced longitudinally extending framework members  
11 secured to said bottom surface of said chassis; one of said frame work members being an inside  
12 framework member and said other framework member being an outside framework member; said  
13 framework members being spaced from each other a distance greater than the width of said  
14 propulsion unit;

15 (b) a driven axle having an inner end, an outer end and a Y-axis,

16 c) first support means connected to said chassis for supporting said inner end of said  
17 driven axle,

18 (d) second support means connected to said chassis for supporting said outer end of said  
19 driven axle,

20 (e) at least two cam-shaped wheels mounted on said driven axle; each cam-shaped wheel  
21 having a rotation axis that coincides with said Y-axis of said driven axle; each cam-shaped wheel  
22 having a first perimeter segment having a mid-point, a second perimeter segment having a mid-  
23 point and a third perimeter segment having a mid-point; said first perimeter segment having a  
24 substantially arcuate contour and said mid-point of said first perimeter segment extends radially  
25 farther from said rotation axis than said mid-points of said second and third perimeter sections;

26 (f) each of said propulsion units having an elongated outside axle support arm having a top  
27 end and a bottom end; a transversely extending outside pivot pin having an inner end and an outer  
28 end; said inner end being and an outer end; said inner end being rigidly secured to said outside  
29 axle support arm adjacent said top end of said outside axle support arm; said outer end of said

1 outside pivot pin being journaled in a bearing attached to said outside framework member;  
2 said bottom end of said outside axle support arm having a bearing attached thereto in  
3 which said outer end of said driven axle is journaled;

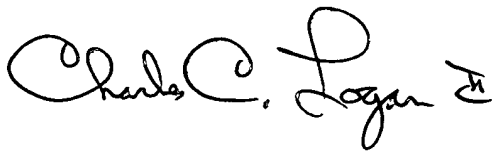
4 (g) each of said propulsion units having an elongated inside axle support arm having a top  
5 end and a bottom end; a transversely extending driveshaft having an inner end and an outer end;  
6 an inside sprocket gear is rigidly mounted on said driveshaft adjacent said inner end, said  
7 driveshaft is journaled in a bearing attached to said inside framework member with said outer end  
8 having a top end sprocket gear rigidly secured thereto;

9 said bottom end of said inside axle support arm having a bearing attached thereto in which  
10 said inner end of said driven axle is journaled; a bottom end sprocket gear is rigidly secured to  
11 said drive axle of said propulsion unit and said bottom end sprocket gear is in vertical alignment  
12 with said top sprocket gear and a chain passes around said respective top end and bottom end  
13 sprocket gears;

14 drive power means mounted on said chassis; and

15 power transmission means connecting said drive power means to said driven axle of said  
16 respective left and right side propulsion units.

17  
18 Respectfully submitted,

19   
20  
21

22 CHARLES C. LOGAN II,

23 No.: 25256

24 8282 UNIVERSITY AVENUE

25 LA MESA, CA 91941

26 619/463-1675

27 463/1665 (fax)